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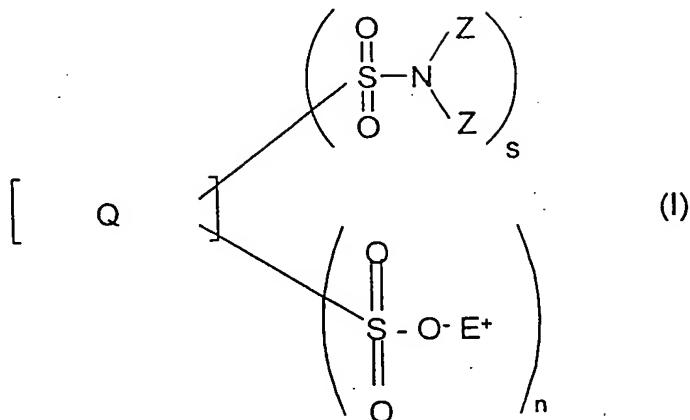
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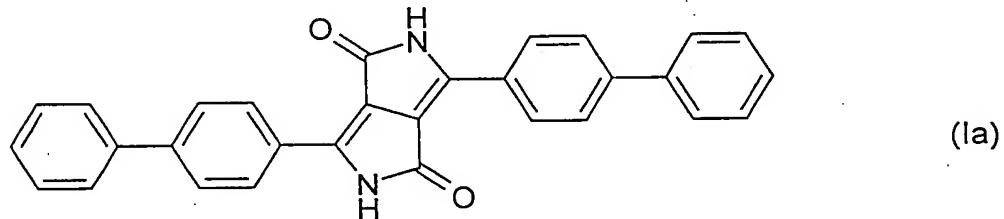
CLAIMS:

1) A pigment dispersant of the formula (I)



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in which Q is a radical of the diketopyrrolopyrrole compound of the formula (Ia)



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s is a number from 0.1 to 4.0,

n is a number from 0 to 2,

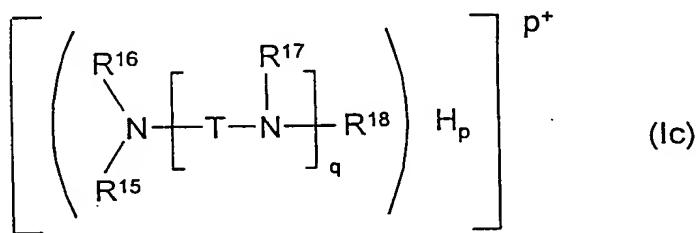
E⁺ is H⁺ or the equivalent M^{m+}/m of a metal cation M^{m+} from main groups 1 to 5 or transition groups 1 or 2 or 4 to 8 of the periodic system of the chemical elements, m being 1, 2 or 3, an ammonium ion N⁺R⁹R¹⁰R¹¹R¹², where the substituents R⁹, R¹⁰, R¹¹ and R¹² independently of one another are each a hydrogen atom, C₁-C₃₀-alkyl, C₂-C₃₀-alkenyl, C₅-C₃₀-cycloalkyl, phenyl, (C₁-C₈)-alkyl-phenyl, (C₁-C₄)-alkylene-phenyl, or a (poly)alkyleneoxy group of the formula -[CH(R⁸⁰)-CH(R⁸⁰)-O]_k-H, in which k is a number from 1 to 30 and the two radicals R⁸⁰

15

independently of one another are hydrogen, C₁-C₄-alkyl or, if k is > 1, a combination thereof;

and in which alkyl, alkenyl, cycloalkyl, phenyl or alkylphenyl is optionally substituted by amino, hydroxyl, carboxyl, or a combination thereof;

5 or where the substituents R⁹ and R¹⁰, together with the quaternary nitrogen atom, are able to form a five- to seven-membered saturated ring system optionally containing further heteroatoms from the group consisting of O, S and N,
 or where the substituents R⁹, R¹⁰ and R¹¹, together with the quaternary nitrogen atom, are able to form a five- to seven-membered aromatic ring system, optionally
 10 containing further heteroatoms from the group consisting of O, S and N, and to which additional rings are optionally fused,
 or in which E⁺ defines an ammonium ion of the formula (Ic)



15

in which

R¹⁵, R¹⁶, R¹⁷ and R¹⁸ independently of one another are hydrogen or a (poly)alkyleneoxy group of the formula -[CH(R⁸⁰)-CH(R⁸⁰)O]_k-H, in which k is a number from 1 to 30 and the two radicals R⁸⁰ independently of one another

20 are hydrogen, C₁-C₄-alkyl or, if k is > 1, a combination thereof;

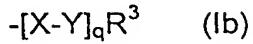
q is a number from 1 to 10,

p is a number from 1 to 5, where p is ≤ q+1;

T is a branched or unbranched C₂-C₆-alkylene radical; or in which T, if q is > 1, may also be a combination of branched or unbranched C₂-C₆-alkylene
 25 radicals;

and in which the two radicals Z are identical or different and Z has the definition Z¹ or Z⁴, where

Z¹ is a radical of the formula (Ib)

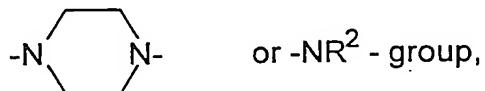


5 in which

X is a C₂-C₆-alkylene radical, a C₅-C₇-cycloalkylene radical, or a combination of these radicals, it being possible for these radicals to be substituted by from 1 to 4 C₁-C₄-alkyl radicals, hydroxyl radicals, (C₁-C₄)-hydroxyalkyl radicals, by 1 or 2 C₅-C₇-cycloalkyl radicals, or in which X, if q is > 1, may also be a combination of said definitions;

10

Y is a -O-;



or in which Y, if q is > 1, may also be a combination of said definitions;

15 q is a number from 1 to 10;

R² and R³ independently of one another are a hydrogen atom, a substituted or unsubstituted, or partly fluorinated or perfluorinated, branched or unbranched (C₁-C₂₀)-alkyl group, a substituted or unsubstituted C₅-C₇-cycloalkyl group or a substituted or unsubstituted, or partly fluorinated or perfluorinated (C₂-C₂₀)-alkenyl group, it being possible for the substituents to be hydroxyl, phenyl, cyano, chloro, bromo, amino, C₂-C₄-acyl or C₁-C₄-alkoxy, or

20 R² and R³, together with the nitrogen atom, form a saturated, unsaturated or aromatic heterocyclic 5- to 7-membered ring optionally containing 1 or 2 further nitrogen, oxygen or sulfur atoms or carbonyl groups in the ring,

25 optionally being substituted by 1, 2 or 3 of the radicals OH, phenyl, CN, Cl, Br, C₁-C₄-alkyl, C₁-C₄-alkoxy, C₂-C₄-acyl and carbamoyl, and optionally carrying 1 or 2 benzo-fused saturated, unsaturated or aromatic, carbocyclic or heterocyclic rings;

30 and where

Z^4 is hydrogen, hydroxyl, amino, phenyl, (C_1-C_4)-alkylene-phenyl, C_5-C_7 -cycloalkyl or C_1-C_{20} -alkyl, it being possible for the phenyl ring, the (C_1-C_4)-alkylene-phenyl group and the alkyl group to be substituted by one or more substituents from the group consisting of Cl, Br, CN, NH₂, OH, C₆H₅, mono-, di- or tri- C_1-C_4 -alkoxy-substituted C₆H₅, carbamoyl, C_2-C_4 -acyl and C_1-C_4 -alkoxy, and it being possible for the phenyl ring and the (C_1-C_4)-alkylene-phenyl group to be substituted by NR²R³, or the alkyl group is perfluorinated or partly fluorinated.

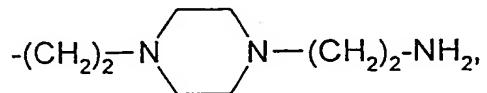
5) The pigment dispersant as claimed in claim 1, wherein s is a number from 0.2 to 3.0, preferably from 0.5 to 2.5; and n is a number from 0 to 0.5.

10) The pigment dispersant as claimed in claim 1, wherein s is a number from 0.5 to 2.5, and n is a number from 0 to 0.2.

15) The pigment dispersant as claimed in claim 1, wherein R² and R³ independently of one another are a hydrogen atom, a C_1-C_6 -alkyl group or a C_1-C_6 -alkyl group substituted by 1 or 2 substituents from the group consisting of hydroxyl, acetyl, methoxy, ethoxy, chloro and bromo, or R² and R³, together with the adjacent nitrogen atom, form an imidazolyl, piperidinyl, morpholinyl, pipecolinyl, pyrrolyl, pyrrolidinyl, pyrazolyl, 20) pyrrolidinonyl, indolyl or piperazinyl ring.

25) The pigment dispersant as claimed in claim 1, wherein Z¹ has the definition -[(CH₂)₃-NH]₂-H, -(CH₂-CH₂-NH)₂H,

-(CH₂)₃-NH-(CH₂)₂-NH-(CH₂)₃-NH₂,

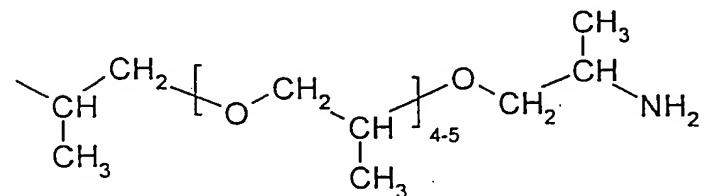
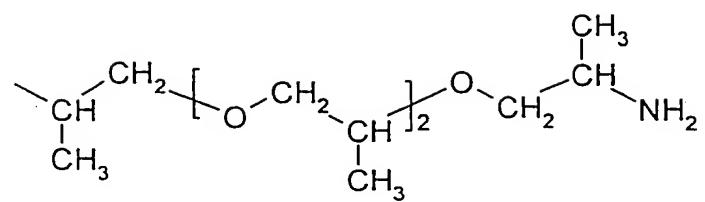


-(CH₂)₃-N(CH₃)-(CH₂)₃-NH₂, -(CH₂)₃-O-(CH₂)₂-O-(CH₂)₃-NH₂,

-(CH₂)₃-O-(CH₂)₃-O-(CH₂)₃-NH₂, -(CH₂)₂-NH-(CH₂)₃-NH₂, -(CH₂)₃-NH-(CH₂)₂-NH₂,

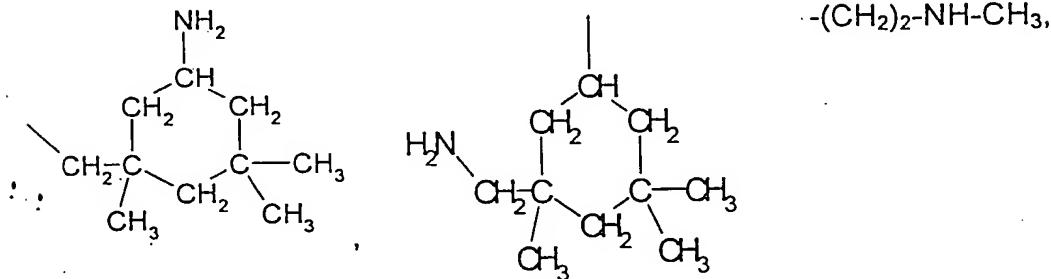
-(CH₂-CH₂-NH)₃-H, -(CH₂-CH₂-NH)₄-H, -(CH₂-CH₂-NH)₅-H,

-(CH₂)₃-O-(CH₂)₂-O-(CH₂)₃-NH₂, -(CH₂)₃-O-(CH₂)₄-O-(CH₂)₃-NH₂,



$-(\text{CH}_2)_2\text{-OH}$, $-(\text{CH}_2)_3\text{-OH}$, $-\text{CH}_2\text{-CH}(\text{CH}_3)\text{-OH}$, $-\text{CH}(\text{CH}_2\text{-CH}_3)\text{CH}_2\text{-OH}$, $-\text{CH}(\text{CH}_2\text{OH})_2$,

$-(CH_2)_2-O-(CH_2)_2-OH$ or $-(CH_2)_3-O-(CH_2)_2-O-(CH_2)_2-OH$; $-(CH_2)_2-NH_2$, $-(CH_2)_3-NH_2$,
 $-CH_2-CH(CH_3)-NH_2$, $-CH_2-C(CH_3)_2-CH_2-NH_2$,

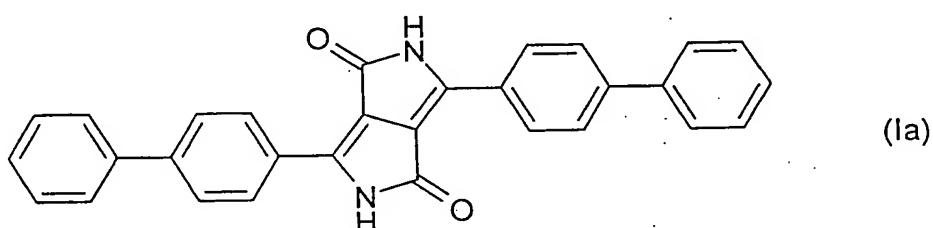


$-(CH_2)_2-N(CH_3)_2$, $-(CH_2)_2-NH-CH_2-CH_3$, $-(CH_2)_2-N(CH_2-CH_3)_2$, $-(CH_2)_3-NH-CH_3$,
 $-(CH_2)_3-N(CH_3)_2$, $-(CH_2)_3-NH-CH_2-CH_3$ or $-(CH_2)_3-N(CH_2-CH_3)_2$.

5 6) The pigment dispersant as claimed in claim 1, wherein Z^4 has the definition
hydrogen, amino, phenyl, benzyl, NR^2R^3 -substituted phenyl or benzyl, C_1-C_6 -alkyl, or
a C_2-C_6 -alkyl, phenyl or benzyl substituted by 1 or 2 substituents from the group
consisting of hydroxyl, acetyl, methoxy and ethoxy.

10 7) The pigment dispersant as claimed in claim 1, wherein X is a C_2-C_4 -alkylene
radical or cyclohexylene.

15 8) A process for preparing a pigment dispersant as claimed in claim 1, which
comprises chlorosulfonating a diketopyrrolopyrrole compound of the formula (Ia)



and reacting the resultant sulfochloride with an amine of the formula (V)



9) A pigment preparation comprising
 a) at least one organic base pigment, and
 b) at least one pigment dispersant of the formula (I) as claimed in claim 1.

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10) A pigment preparation as claimed in claim 9, wherein the organic base pigment a) is a perylene, perinone, quinacridone, quinacridonequinone, anthraquinone, anthanthrone, benzimidazolone, disazo condensation, azo, indanthrone, phthalocyanine, triarylcarbonium, dioxazine, aminoanthraquinone, diketopyrrolopyrrole, thioindigo, isoindoline, isoindolinone, pyranthrone, isoviolanthrone or carbon black pigment or a mixture thereof.

11) The pigment preparation as claimed in claim 9, consisting essentially of
 a) from 50 to 99.5% by weight of at least one base pigment a),
 b) from 0.5 to 20% by weight of at least one pigment dispersant b) of the formula (I),
 c) from 0 to 20% by weight of surfactants, and
 d) from 0 to 20% by weight of further customary additives,
 the fractions of the respective components being based on the overall weight of the preparation (100% by weight).

12) The pigment preparation as claimed in claim 9, consisting essentially of
 a) from 60 to 98.8% by weight of at least one base pigment a),
 b) from 1 to 15% by weight of at least one pigment dispersant b) of the formula (I),
 c) from 0.1 to 15% by weight of surfactants, and
 d) from 0.1 to 10% by weight of further customary additives,
 the fractions of the respective components being based on the overall weight of the preparation (100% by weight).

13) A process for preparing a pigment preparation as claimed in claim 9, which comprises mixing the pigment dispersant(s) as per b) and the base pigment(s) with one another.

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14) A method of pigmenting high molecular mass organic material, electrophotographic toners and developers, and writing, drawing and printing inks comprising the step of adding a pigment preparation as claimed in claim 9 to a high molecular mass organic material, electrophotographic toner and developer, or to the basis of a writing, drawing or printing ink to be pigmented.

10 15) The method as claimed in claim 14, wherein the high molecular mass organic material is a plastic, a resin, a varnish or a paint.

15 16) A prepared pigment formulation consisting essentially of
a) one or more organic base pigments;
b) one or more pigment dispersants of the formula (I) as claimed in claim 1; and
c) a high molecular mass organic material.